

**What Is Claimed Is:**

1. An isolated nucleic acid molecule encoding a collagen-binding protein, wherein the collagen-binding protein is isolated from group A *Streptococcus* bacteria.
2. The isolated nucleic acid molecule of Claim 1, wherein the protein is encoded by an amino acid sequence selected from the group consisting of SEQ ID NO. 2 and SEQ ID No.4.
3. The isolated nucleic acid of Claim 1, comprising a sequence selected from the group consisting of SEQ ID NO. 1 and SEQ ID NO. 3.
4. The isolated nucleic acid of Claim 1, comprising a sequence that selectively hybridizes to a sequence selected from the group consisting of SEQ ID NO. 1 and SEQ ID NO. 3.
5. An isolated collagen-binding protein from group A streptococci selected from the group consisting of Cpa1 and Cpa49.
6. An isolated collagen-binding protein from group A streptococci having a selected from the group consisting of SEQ ID NO. 2 and SEQ ID NO. 4.
7. An isolated collagen-binding protein according to Claim 6 wherein the protein is isolated from *Streptococcus pyogenes*.
8. Antibody or antisera raised against the protein of Claim 5.

9. A diagnostic kit for determining the presence of Cpa1 or Cpa49 proteins comprising a protein according to Claim 5 and means to introduce the protein to a sample.

10. A diagnostic kit for determining the presence of Cpa1 or Cpa49 proteins comprising antibodies reactive with either Cpa1 or Cpa49 and means to introduce the antibodies to a sample.

11. A pharmaceutical composition for treating or preventing a group A streptococcal infection comprising the protein of Claim 5 and a pharmaceutically acceptable carrier or excipient.

12. A pharmaceutical composition for treating or preventing a group A streptococcal infection comprising antisera or an antibody according to Claim 5 and a pharmaceutically acceptable carrier or excipient.

13. A method of treating or preventing a group A streptococcal infection in a patient comprising administering to the patient an isolated protein selected from the group consisting of Cpa1, Cpa49 and active fragments thereof in an amount sufficient to inhibit binding of group A streptococci to collagen.

14. The method of Claim 13, wherein the infection treated is selected from the group consisting of skin and mucous membrane infections, connective tissue infections and septicemia.

15. A method of treating or preventing a group A streptococcal infection in a patient comprising administering to the patient antibodies to a protein selected from the group consisting of Cpa1, Cpa49 and active fragments thereof in an amount sufficient to inhibit binding of group A streptococci to collagen.

16. A method of reducing group A streptococci infection of an indwelling medical device comprising coating the medical device with a composition comprising a protein selected from the group consisting of Cpa1, Cpa49 and active fragments thereof.

17. The method of Claim 16 wherein the medical device is selected from the group consisting of vascular grafts, vascular stents, intravenous catheters, artificial heart valves, and cardiac assist devices.

18. A method of inducing an immunological response comprising administering to a patient a composition comprising an isolated protein selected from the group consisting of Cpa1, Cpa49 and active fragments thereof.

add  
C11